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Article

Salaried workers' self-perceived health and psychosocial risk in Guayaquil, Ecuador

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Abstract: Self-perceived health is an important indicator of occupational health. This research explores the relationship between poor self-perceived health and exposure to psychosocial risk factors, taking into account potential socio-demographic, occupational and employment determinants. Using data from the First Survey of Occupational Safety and Health Conditions covering 1049 salaried workers in Guayaquil, Ecuador descriptive and stratified binary logistic regression analyses (Odds Ratios with corresponding 95% confidence intervals) were carried out. Significant relationship was found between exposure to psychosocial risk factors and the probability of presenting poor self-perceived health by socio-demographic, occupational and employment characteristics. Occupational exposure factors to psychosocial risks are predictors of self-perceived ill health and are related to the variables analyzed; the most frequently expressed factors among the respondents were Cognitive Demands (DGOG) and Job Insecurity (IL). The results have implications in terms of designing effective workplace interventions pursuant of ensuring the health and wellbeing of employee.

Keywords: Self-perceived health; Psychosocial risks; Determining factors; Workplaces; Ecuador.

1. Introduction

The Due to its relative validity and reliability, self-perceived health status (SHS) is one of the most widely used indicators for measuring health in the working population [1,2]. The importance of this indicator lies in its close relationship with the social, economic and occupational characteristics of the worker [3].

Recent research has demonstrated relationships between psychosocial risk factors present in working conditions and negative effects on SHS [4,5], especially in low- and middle-income countries [6]. It is important to emphasize that self-perceived ill health in the workplace is multi-factorial because it is associated with social relationships, work characteristics and cultural aspects of the organization [7].

Interpersonal conflicts (between colleagues and because of inadequate support from employers) have been identified as generating work stress, resulting in poor sleep quality, anxiety states and depression [8]. Further, concerns about potentially losing current employment manifest themselves in a variety of physical and psychological ailments which, at times, can be so severe that recovery is not possible [9,10]. The greater the demands or requirements of work activities (emotional, cognitive and quantitative) and the lesser the possibility of control, the greater the likelihood of illness as a result of psychological stress [11, 12, 13]. Moreover, there is a positive association between long working hours and the risk of suffering from cardiovascular diseases [14] as well as conflicts between

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employment and family [15]. Finally, job insecurity and employment characteristics have been studied as determinants of health inequalities.

In particular, the Republic of Ecuador is among the most unequal countries in Latin America and the Caribbean [16,17]. Therefore, labour and employment conditions are also key dimensions in determining SHS [18]. As discussed above, the detrimental effects of psychosocial health risks are well documented in the workplace. However, there is a dearth of research in this respect which specifically focusses on Ecuador [12]. This is important because if the determinants of occupational ailments and diseases are not understood, it is not possible to institute evidence-based interventions to improve working conditions [19].

Accordingly, using data from salaried workers in the Ecuadorian city of Guayaquil, the objective of this study was to determine the relationship between poor self-perceived health and exposure to psychosocial risk factors and to analyze this with respect to potential socio-demographic, labour and employment determinants.

2. Materials and Methods

2.1. *Design, Data and Population*

An observational cross-sectional research design was configured based on data from the First Survey of Occupational Safety and Health Conditions (I-ECSST) covering salaried workers over the age of 18 in the Ecuadorian city of Guayaquil (n=1049) in 2017. Further details on the design and validation of the I-ECSST are publicly available [20]. The sample selection and data collection procedures are similar to previous studies conducted in the country's capital, Quito [21,22].

2.2. *Analytical variables*

The dependent variable (SHS) was generated from question P.42 included in the Health Conditions Dimension of the I-ECSST: "How do you consider your health? The Likert response scale of the question was dichotomized into good self-perceived health (excellent, very good and good) and poor self-perceived health (fair, poor and very poor).

The independent variables used were the psychosocial risk factors at work ascertained from questions included in the Psychosocial Dimension of the survey: (i) Social Support from Colleagues - ASc, (ii) Social Support from Bosses - ASj, (iii) Job Insecurity - IL, (iv) Emotional Demand - DEMO, (v) Cognitive Demand - DCOG and (vi) Quantitative Demand - DCUA. As per the foregoing, all of these variables are considered as possible determinants of poor SHS in the working population.

(i) Q.33 "Do you feel supported by your team?
(ii) Q.34 "Do you feel supported by your superiors in your current work?
(iii) Q.35 Are you afraid of losing your current job?
(iv) Q.32 Are you exposed to negative feelings, emotions or treatment from others in the course of your work?
(v) Q.30. Do you have to make a mental effort to do your job?
(vi) Q.31 Do you have the time required to perform the tasks your job demands?

2.3. *Statistical analysis*

First, differences amongst the respondents were examined by applying chi-square tests. Next, to estimate the association and excess risk between SHS and psychosocial risk factors, Odds Ratios and the corresponding 95% confidence intervals (OR; CI95%) were calculated and stratified by the socio-

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demographic, employment and labour variables applying the Cochran-Mantel-Haenszel test to confirm/refute explanatory differences. All analyses were executed using SPSS version 21.0.

3. Results

Table 1 presents the general characteristics and self-perceived health of the sample. Overall, self-perceived ill health was reported by 12% of the respondents and this did not differ significantly by gender ($p>0.05$). Self-perceived ill health increases progressively with age and lower educational level ($p<0.05$).

Table 1. General characteristics and self-perceived health of the sample (n=1049)

Variables	n	%n	SHS		p-value
			Good	Poor	
Socio-Demographics					
Sex					
Woman	519	49.5	88.2	11.8	0.660
Man	530	50.5	87.4	12.6	
Age (years)					
Young people (≤24)	146	13.9	93.2	6.8	
Adults (25-54)	857	81.7	87.6	12.4	0.002
Elderly (≥55)	46	4.4	73.9	26.1	
Educational Level					
Superior	477	45.5	89.9	10.1	
Medium	477	45.5	88.1	11.9	0.001
Basic	95	9.1	75.8	24.2	
Labour					
Sector					
Private	840	80.1	89.3	10.7	0.003
Public	209	19.9	81.8	18.2	
Economic activity					
Agriculture	27	2.6	88.9	11.1	
Construction	81	7.7	82.7	17.3	0.511
Industry	91	8.7	86.8	13.2	
Services	850	81	88.4	11.6	
Company size					
Micro	151	14.4	85.4	14.6	
Small	384	36.6	87.8	12.2	0.402
Medium	305	29.1	90.2	9.8	
Large	209	19.9	86.1	13.9	
Employment					
Employment Category					
Superior	93	8.9	84.9	15.1	
Medium	812	77.4	90.0	10.0	0.000
Lower	144	13.7	77.1	22.9	
Tenure (years)					
<1	32	3.1	96.9	3.1	0.111
≥1	1017	96.9	87.5	12.5	
Weekly Work (hours)					
≤ 40	731	69.7	89.2	10.8	0.036
>40	318	30.3	84.6	15.4	

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Turning to labour characteristics, workers in the public sector ($p<0.05$), in construction and industry ($p>0.05$) and in micro and large enterprises ($p>0.05$) showed a greater tendency towards self-perceived ill health. Finally, in terms of employment characteristics, workers in lower categories (unskilled jobs), with one year or more of tenure in the current enterprise ($p>0.05$) and with working weeks exceeding 40 hours ($p<0.05$) reported greater presence of self-perceived ill health.

In general, it can be observed that the most common factors of exposure to psychosocial risks noted by the surveyed workers were Cognitive Demands (DGOG) and Job Insecurity (IL), without statistically significant differences ($p>0.05$) by socio-demographic (Figure 1), occupational (Figure 2) and employment characteristics (Figure 3).

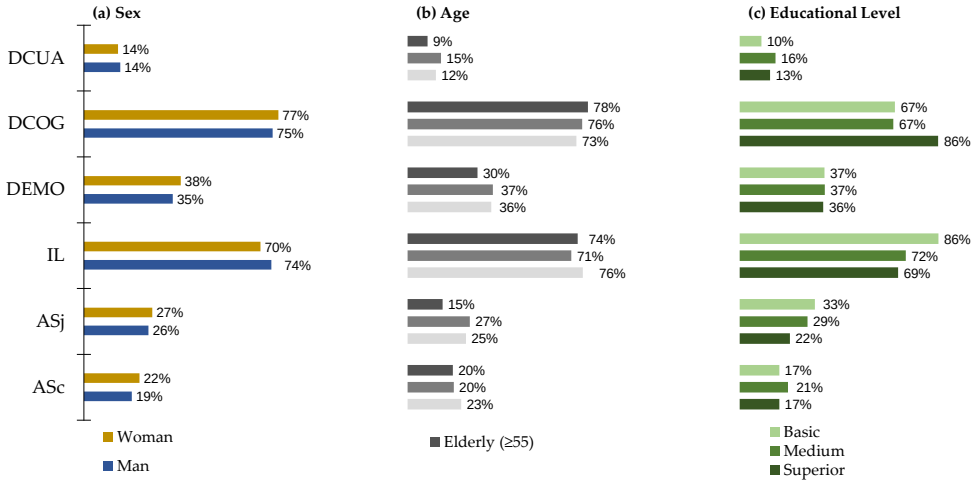

Figure 1. Psychosocial risk factors by socio-demographic characteristics (n = 1049)

ASc = Social Support Colleagues (% Answers No), ASj = Social Support Bosses (% Answers No), IL = Job Insecurity (% Answers Yes), DEMO = Emotional Demand (% Answers Yes / Partly), DCOG = Cognitive Demand (% Answers Yes / Partly), DCUA = Quantitative Demand (% Answers No / Partly).

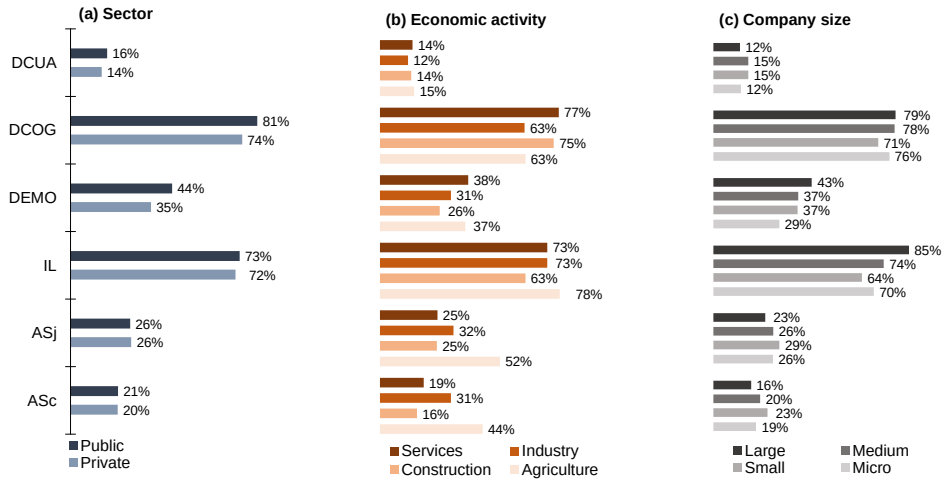

Figure 2. Psychosocial risk factors by job characteristics (n=1049)

ASc = Social Support Colleagues (% Answers No)**, ASj** = Social Support Bosses (% Answers No)**, IL = *Job Insecurity (% Answers Yes)*, DEMO** = Emotional Demand (% Answers Yes / Partly), **DCOG =** Cognitive Demand (% Answers Yes / Partly), **DCUA =** Quantitative Demand (% Answers No / Partly).

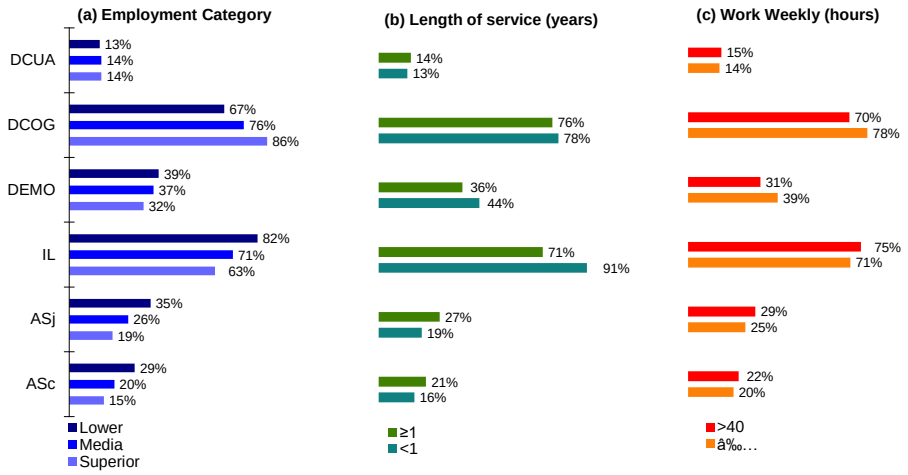

Figure 3. Psychosocial risk factors by employment characteristics (n=1049)

ASc = Social Support Colleagues (% Answers No), **ASj** = Social Support Bosses (% Answers No), **IL** = Job Insecurity (% Answers Yes), **DEMO** = Emotional Demand (% Answers Yes / Partly), **DCOG** = Cognitive Demand (% Answers Yes / Partly), **DCUA** = Quantitative Demand (% Answers No / Partly).

Figure 4 presents results concerning the association and excess risk analysis between SHS and psychosocial risk factors. Among the dimensions of psychosocial risk at work and self-perceived ill-health are Quantitative Demands (QDHR = OR: 3.03; 95% CI: 1.97-4.66), Social Support from colleagues (ASc = OR: 2.04; IC95%: 1.36-3.06) and bosses (ASj = OR: 1.91; IC95%: 1.30-2.81) and, finally, Emotional Demands (DEMO = OR: 1.46; IC95%: 1.00-2.12).

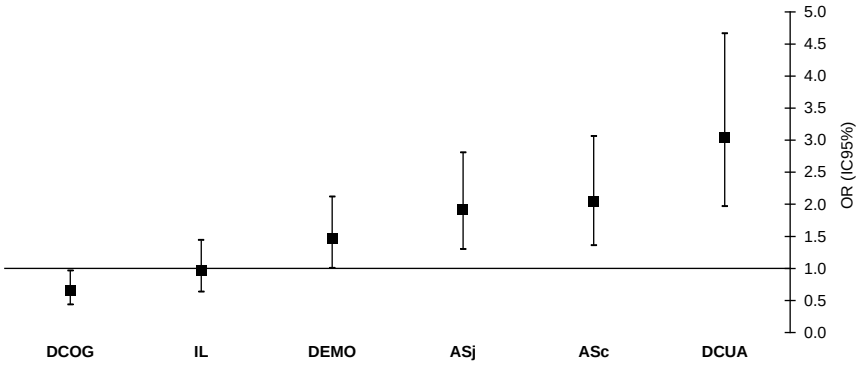

Figure 4. Odds Ratios of psychosocial risk factors and poor SHS

ASc = Social Support Colleagues, ASj = Social Support Bosses, IL = Job Insecurity, DEMO = Emotional Demand, DCOG = Cognitive Demand, DCUA = Quantitative Demand

Results of analyses stratified by socio-demographic, labour and employment characteristics are shown in Table 2. Quantitative Demands (QD) are significantly more likely to lead to poor self-perceived health among women (OR: 3.98, 95% CI: 2.16-7.33, p<0.001) and men (OR = 2.33, 95% CI: 1.26-4.30, p<0.01), aged 25-54 years (OR: 3.47; 95% CI: 2.18-5.51; p<0.001), with higher (OR: 5.73; 95% CI: 2.97-11.06; p<0.001) and middle (OR: 2.19; 95% CI: 1.14-4.19; p<0.01) levels of education, both private (OR: 2.70; 95% CI: 1.61-4.53; p<0.001) and public (OR: 3,93; IC95%: 1,74-8,88; p<0,001), in industrial activities (OR: 8,69; IC95%: 2,11-35,87; p<0,001) and services (OR: 2,83; IC95%: 1,73-4,61;

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p<0,05), with average employment category (OR: 3,70; IC95%: 2.22-6.18; p<0.001) and with a slightly higher probability in those salaried workers who reported working ≤ 40 hours per week (OR: 3.31; IC95%: 1.94-5.65; p<0.001) compared to >40 hours per week (OR: 2.58; IC95%: 1.24-5.37; p<0.01), with significant differences observed in the Cochran-Mantel-Haenszel test (s1, p=0.001).

Table 2. Stratified Odds Ratios of psychosocial risk factors at work and poor SHS

Variables	ASc		ASj		IL	
	OR (IC95%)	Testa	OR (IC95%)	Testa	OR (IC95%)	Testa
Socio-Demographics						
Sex						
Woman	2.06 (1.16-3.66)**	s1	2.24 (1.29-3.89)**	s1	1.14 (0.63-2.06)	s4
Man	2.04 (1.15-3.62)**		1.64 (0.95-2.83)		0.80 (0.46-1.41)	
Age (years)						
Young people (≤24)	1.45 (0.35-5.95)		0.72 (0.15-3.56)		1.28 (0.26-6.34)	
Adults (25-54)	2.23 (1.43-3.48)***	s1	2.24 (1.47-3.41)***	s1	0.98 (0.63-1.54)	s4
Elderly (≥55)	1.56 (0.32-7.52)		1.16 (0.19-6.95)		0.62 (0.15-2.59)	
Educational Level						
Superior	1.94 (0.98-3.85)*		1.55 (0.80-3.01)		0.81 (0.43-1.52)	
Medium	1.56 (0.84-2.92)	s3	2.07 (1.18-3.65)**	s3	1.09 (0.59 2.05)	s4
Basic	2.84 (1.08-7.46)*		1.87 (0.71-4.92)		0.45 (0.13-1.55)	
Labour						
Sector						
Private	2.04 (1.26-3.28)**	s1	2.39 (1.52-3.74)***	s1	1.18 (0.72-1.94)	s4
Public	2.08 (0.95-4.58)		1.03 (0.46-2.29)		0.56 (0.27-1.18)	
Economic activity						
Agriculture	2.80 (0.22-35.29)		1.27 (0.97-1.67)		-	
Construction	1.56 (0.37-6.58)	s1	2.84 (0.85-9.53)	s1	1.07 (0.32-3.56)	s4
Industry	1.74 (0.50-6.05)		2.44 (0.71-8.34)		0.48 (0.14-1.66)	
Services	2.18 (1.37-3.47)***		1.68 (1.08-2.64)**		1.02 (0.63-1.62)	
Company size						
Micro	2.40 (0.87-6.60)		1.81 (0.69-4.71)		0.73 (0.28-1.89)	
Small	2.05 (1.07-3.92)*	s1	1.83 (0.98-3.45)	s1	0.88 (0.47-1.65)	s4
Medium	1.80 (0.78-4.14)		2.83 (1.31-6.10)**		1.47 (0.58-3.75)	
Large	2.26 (0.90-5.63)		1.38 (0.57-3.35)		0.85 (0.30-2.41)	
Employment						
Employment Category						
Superior	1.69 (0.41-7.02)		0.33 (0.04-2.71)		1.04 (0.32-3.42)	
Medium	1.86 (1.11-3.10)**	s1	1.72 (1.06-2.79)*	s3	0.90 (0.55-1.49)	s4
Lower	2.29 (1.01-5.18)*		3.35 (1.50-7.48)**		0.77 (0.29-2.02)	
Tenure (years)						
<1	0.96 (0.89-1.04)	s1	-	s2	1.04 (0.97-1.11)	s4
≥1	2.05 (1.36-3.08)***		1.91 (1.30-2.82)***		0.98 (0.65-1.47)	
Weekly Work (hours)						
≤ 40	1.56 (0.91-2.66)	s1	1.67 (1.01-2.74)*	s2	1.37 (0.80-2.35)	s4
>40	3.02 (1.58-5.77)***		2.27 (1.22-4.24)**		0.51 (0.26-0.97)	

ASc = Social Support Colleagues, **ASj** = Social Support Bosses, **IL** = Job Insecurity, **DEMO** = Emotional Demand, **DCOG** = Cognitive Demand, **DCUA** = Quantitative Demand.

*p<0.05; **p<0.01; ***p<0.001. [a]Cochran-Mantel-Haenszel test. s1 = 0.001; s2 = 0.002; s3 = 0.003; s4 = >0.01.

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Table 2. Continued.

Variables	DEMO		DCOG		DCUA	
	OR (IC95%)	Test[a]	OR (IC95%)	Test[a]	OR (IC95%)	Test[a]
Socio-Demographics						
Sex						
Woman	1.49 (0.88-2.50)	s4	0.69 (0.38-1.25)	s4	3.98 (2.16-7.33)***	s1
Man	1.44 (0.84-2.46)		0.61 (0.35-1.06)		2.33 (1.26-4.30)**	
Age (years)						
Young people (≤24)	1.83 (0.51-6.65)		0.84 (0.21-3.42)		1.88 (0.37-9.62)	
Adults (25-54)	1.42 (0.94-2.14)	s4	0.60 (0.39-0.94)*	s4	3.47 (2.18-5.51)***	s1
Elderly (≥55)	1.98 (0.50-7.87)		0.78 (0.17-3.66)		0.94 (0.09-10.00)	
Educational Level						
Superior	1.88 (1.03-3.42)*		0.66 (0.31-1.44)		5.73 (2.97-11.06)***	
Medium	1.09 (0.62-1.92)	s4	0.71 (0.40-1.25)	s4	2.19 (1.14-4.19)**	s1
Basic	1.83 (0.71-4.76)		0.68 (0.26-1.82)		1.65 (0.38-7.20)	
Labour						
Sector						
Private	1.43 (0.92-2.23)	s4	0.66 (0.41-1.05)	s4	2.70 (1.61-4.53)***	s1
Public	1.34 (0.66-2.72)		0.50 (0.22-1.12)		3.93 (1.74-8.88)***	
Economic activity						
Agriculture	4.00 (0.31-51.03)		0.25 (0.02-3.19)		3.50 (0.24-51.46)	
Construction	2.60 (0.78-8.67)	s4	0.52 (0.15-1.79)	s4	2.01 (0.46-8.79)	s1
Industry	1.15 (0.32-4.17)		1.22 (0.34-4.42)		8.69 (2.11-35.87)***	
Services	1.40 (0.92-2.14)		0.63 (0.40-1.01)		2.83 (1.73-4.61)***	
Company size						
Micro	0.93 (0.34-2.57)		0.30 (0.12-0.78)*		2.62 (0.83-8.29)	
Small	1.21 (0.65-2.26)	s4	0.84 (0.43-1.62)	s4	3.63 (1.83-7.19)***	s1
Medium	2.13 (1.00-4.55)		0.61 (0.27-1.40)		4.73 (2.09-10.66)***	
Large	2.13 (1.00-4.55)		0.81 (0.32-2.05)		1.28 (0.40-4.06)	
Employment						
Employment Category						
Superior	3.46 (1.08-11.10)*		0.97 (0.19-4.94)		3.11 (0.81-12.02)	
Medium	1.35 (0.85-2.16)	s4	0.57 (0.35-0.92)*	s4	3.70 (2.22-6.18)***	s1
Lower	1.21 (0.55-2.67)		0.96 (0.42-2.19)		1.68 (0.58-4.82)	
Tenure (years)						
<1	0.94 (0.84-1.06)	s4	-	s4	1.33 (0.76-2.35)**	s1
≥1	1.50 (1.03-2.19)*		0.67 (0.45-1.00)*		2.93 (1.89-4.53)***	
Weekly Work (hours)						
≤ 40	1.72 (1.07-2.74)*	s4	0.70 (0.42-1.19)	s4	3.31 (1.94-5.65)***	s1
>40	1.19 (0.63-2.26)		0.62 (0.33-1.17)		2.58 (1.24-5.37)**	

ASc = Social Support Colleagues, **ASj** = Social Support Bosses, **IL** = Job Insecurity, **DEMO** = Emotional Demand, **DCOG** = Cognitive Demand, **DCUA** = Quantitative Demand

*p<0.05; **p<0.01; ***p<0.001. [a]Cochran-Mantel-Haenszel test. s1 = 0.001; s2 = 0.002; s3 = 0.003; s4 = >0.01.

The lack of peer social support (ASc) which is most associated with poor self-perceived health is observed among women (OR: 2.06; 95% CI: 1.16-3.66; p<0.01), men (OR = 2.04, 95% CI): 1.15-3.62;

p<0.01) and respondents aged 25-54 years (OR: 2.23; 95% CI: 1.43-3.48; p<0.001), with significant differences observed in the Cochran-Mantel-Haenszel test (s1, p=0.001). Similarly, this is also the case in those salaried workers with basic education (OR: 2.84; IC95%: 1.08-7.46; p<0.05) with respect to other educational levels (s3, p=0.003). In terms of labour characteristics, those working in the private sector (OR: 2.04; IC95%: 1.26-3.28; p<0.01), services (OR: 2.18; IC95%: 1.37-3.47; p<0.001) and in small enterprises (OR: 2.05; IC95%: 1.07-3.92; p<0.05) have a higher probability of poor SHS due to lack of peer social support (s1, p=0.001). Workers in lower employment categories (OR: 2.29; IC95%: 1.01-5.18; p<0.05) and medium employment categories (OR: 1.86; IC95%: 1.11-3.10; p<0.01), with 1 year or more of employment in the current company (OR: 2.05; IC95%: 1.36-3.08; p<0.001) and who declared to work ≤ 40 hours per week (OR: 3.02; IC95%: 11.58-5.77; p<0.001), also present excess risk (s1 = 0.001).

Among the characteristics that are most associated with poor self-perceived health and lack of social support from employers are being female (OR: 2.24; 95% CI: 2.24): 1.29-3.89; p<0.01) and between 25 and 54 years of age (OR: 2.24; IC95%: 1.47-3.41; p<0.001), with significant differences observed in the Cochran-Mantel-Haenszel test (s1, p=0.001). Salaried workers with basic educational levels (OR: 2.84; IC95%: 1.08-7.46; p<0.05) present a higher probability of poor SHS due to lack of support from employers with respect to other educational levels (s3 = 0.003). Similarly, this is also the case in those workers employed in the private sector (OR: 2,39; IC95%: 1,52-3,74; p<0,001), services (OR: 1,68; IC95%: 1,08-2,6464; p<0,01) and in medium sized companies (OR: 2,83; IC95%: 1,31-6,10; p<0,01), with statistically significant differences (s1 = 0,001). In terms of employment characteristics, those working in lower occupations (OR: 3,35; IC95%: 1,50-7,48; p<0,01) and medium occupations (OR: 1,72; IC95%: 1,06-2,79; p<0,05), also present statistically significant differences in this respect (s3 = 0,003). Moreover, length of service of 1 year or more in the current company (OR: 1.91; IC95%: 1.30-2.82; p<0.001) is also associated with a greater risk of presenting poor self-perceived health, particularly where those workers declare to work ≤ 40 hours per week (OR: 2.27; IC95%: 11.22-4.24; p<0.01) compared to those who work ≤ 40 hours per week (OR: 1.67; IC95%: 1.01-2.74; p<0.05), with statistically significant differences observed (s2 = 0.002).

Finally, Emotional Demand (DEMO) is associated with a significantly higher probability of having poor self-perceived health in those salaried workers with higher education levels (OR: 1.88; CI95%: 1.03-3.42; p<0.05), in the higher employment category (OR: 3.46; CI95%): 1,08-11,10; p<0,05), with a tenure of 1 year or more in the current company (OR: 1,50; IC95%: 1,03-2,19; p<0,05) and who declared to work ≤ 40 hours per week (OR: 1,72; IC95%: 1,07-2,74; p<0,05), but without a statistically significant difference in the Cochran-Mantel-Haenszel test (s4 = >0,01).

4. Discussion

This paper explores the influence of exposure to psychosocial risk factors on the probability of presenting poor self-perceived health. This was accomplished through a stratified analysis of socio-demographic, labour and employment determinants in a large sample of salaried workers in the Ecuadorian city of Guayaquil (n=1049).

The findings were similar between women and men. However, several studies have observed that lack of social support from colleagues and particularly from employers, as well as high quantitative demands at work, may affect SHS among women to a greater extent [23, 24, 25, 26, 27]. In this sense, it would be useful for organizations in general and human resources personnel more specifically to design strategies aiming to strengthen collaboration in the workplace.

In our analyses, no significant relationship was found between exposure to psychosocial risk factors and likelihood of self-perceived ill health for the vast majority of the occupational variables

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analyzed, except for the influence of peer and managerial support in private and service enterprises [28].

With regard to the tenure of workers (1 year or more), the findings are consistent with other studies [1,29]. Length of service in the company, understood as the time of exposure to psychosocial risk factors, may be associated with work-related stress and, therefore, the manifestation of different physical, mental and psychosomatic symptoms in workers [11,12,13,14].

Finally, in our results we observed that workers with long working hours (>40 hours per week), who suffer from a lack of social support (bosses and colleagues) and high demands or requirements in their work activities (emotional, cognitive and quantitative) have a higher risk of self-perceived ill health. It has hitherto been shown that workers exposed to these psychosocial risk factors have higher rates of many different illnesses [30, 31]. It is therefore important to devise initiatives that improve the work climate, minimize work-family conflicts and make workloads and hours more flexible in an attempt to counteract negative health effects.

It is necessary to take into account some limitations of the study. This was a cross-sectional analysis based on data from 2007, carried out in a specific geographical area and in a particular working population i.e. the formal sector. However, by virtue of the large sample size it is reasonable to suggest that the results reflect the population they represent in Ecuador's second largest city. As such this study could provide a useful starting point and framework for cognate analyses which configure longitudinal and/or nationwide research designs. In addition, the use of the self-perceived health indicator could be another limitation, as it is a subjective measure. However, in similar studies it has been shown to be valid and reliable [2]. While the generalization of these results should be approached with due caution, the findings presented allow for a better understanding of the relationship between exposure to psychosocial risks and poor self-perceived health and can usefully be compared to related extant studies [17,20].

5. Conclusions

Psychosocial risks are predictors of self-perceived ill health and are related to socio-demographic, occupational and employment determinants in salaried workers in the Ecuadorian city of Guayaquil. This evidence demonstrates the need to design interventions vis-à-vis psychosocial risks that will not only reduce damage to workers' health, but also bring about economic, social and organizational improvements for companies.

With the intention of continuing to generate knowledge in this domain of research, it would be advisable to explore data spanning other geographical areas, in order to verify/refute the trends identified and explored herein. In this sense, an appropriate strategy would be to set up multidisciplinary working groups, using the same survey and statistical methodologies. Finally, it is important for public bodies to reinforce the importance of psychosocial risks in a more specific way with a view to ensuring the health and wellbeing of employees.

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